

ABSTRACT OF THE DISCLOSURE

An efficient routing method (i.e., protocol) for use with wireless ad-hoc networks, referred to as "dynamic source tracing" or DST routing, that considerably reduces control overhead and thereby increases the available bandwidth while conserving power at the mobile stations. DST routing also provides high user throughput and can operate efficiently in a variety of traffic situations. DST employs a source-tracing algorithm that provides loop checking of complete paths prior to an entry being made into the routing table. In addition, DST makes use of information about the length and second-to-last hop (predecessor) of the shortest path to all known destinations, thus eliminating the counting to infinity problem, such as exhibited by the distributed Bellman-Ford protocol.